


Virginia Electric and Power Company  
Case No. PUR-2018-00065  
Environmental Respondents  
First Set

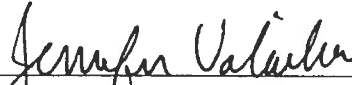
11

The following response to Question No. 30 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision.



Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

The following response to Question No. 30 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to legal matters.



Vishwa B. Link  
McGuireWoods LLP

**Question No. 30**

Reference page 22 ("In Section 2.3 of the 2017 Plan, the Company detailed the major differences between the methods used by PJM in its load forecasting process and those used by the Company. This presentation also reflected how these methodological differences are causing the differences in the resulting forecasts. These differences still exist between PJM and the Company, which again have resulted in differing peak demand and energy forecasts."). With regard to the differences explained in the Company's 2017 Integrated Resource Plan ("2017 Plan"), which the Company avers "still exist" in the 2018 Plan:

- a) Provide a narrative describing these differences as they pertain to the 2018 Plan, as was included in the 2017 Plan (see 2017 Plan, pages 25 to 29, Section 2.3).
- b) Provide graphs showing the impact of these differences to the 2018 Plan, as were included in the 2017 Plan (see 2017 Plan, pages 25 to 29, Figures 2.3.1, 2.3.2, 2.3.3, 2.3.4, and 2.3.5).


- c) Provide workpapers for the impact of each difference to the 2018 Plan, as were shown in 2017 Plan (see 2017 Plan, pages 25 to 29, Figures 2.3.1, 2.3.2, 2.3.3, 2.3.4, and 2.3.5).

**Response:**

The Company objects to this request because it would require original work, as the Company has conducted this analysis for the 2018 forecast. Notwithstanding and subject to this objection, the Company provides the following response: See the listed citations from the 2017 Plan.

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**First Set**

The following response to Question No. 36 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision.



Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

**Question No. 36**

Reference page 17 ("The final forecasted zonal peak and energy values include subsequent adjustments for projected block loads from incremental new data centers, or other significant load additions not reflected in the hourly regression equations."). For the subsequent adjustment to the forecast to represent incremental new data centers:


- a) Provide all research, analysis and documentation of the anticipated load addition.
- b) Provide workpapers for the adjustment that was made to the forecast for the load addition.
- c) Explain the methodology that was used to determine the amount of the load addition that is already reflected in the load forecast, and the amount of the adjustment.

**Response:**


- a) See the Company's response to Staff Set 2-16.
- b) See the Company's response to subpart (a) of this question and the related attachments. See also the Company's response to ER Set 1-4, in particular, Attachment ER Set 1-4(a). The Company does not use its two econometric models to develop its forecast.
- c) See the Company's response to ER Set 1-4, in particular, Attachment ER Set 1-4(a).

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**First Set**

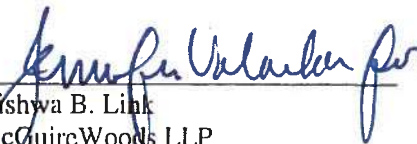
The following response to Question No. 37(a), (c), and (d) of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision.

  
 Stan Blackwell  
 Director – Customer Solutions  
 Dominion Energy Virginia

The following response to Question No. 37(b), (c), (f), and (g) of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision.

  
 Karim Siamer  
 Lead Economist,  
 Load Research and Forecast  
 Dominion Energy Services, Inc.

The following response to Question No. 37(a), (c), (d) of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to legal matters.

  
 Vishwa B. Link  
 McGuireWoods LLP

---

**Question No. 37**

Reference page 22 (“Another driver of energy sales in the Company’s service territory is new and existing data centers. The Company has seen significant interest in data centers locating in Virginia because of its proximity to fiber optic networks as well as low-cost, reliable power sources.”).

- a) Provide historical data center loads since 2000, including monthly energy and peak loads as far back as data is available, and breaking out DOM zone and DOM LSE loads. Provide details for each individual other LSE, to the extent available.



- b) Provide all historical forecasts of DOM zone and DOM LSE data center peak load and annual energy prepared by the Company, or prepared for the Company, or relied upon by the Company, over the past twenty years.
- c) Provide separate historical hourly data center loads for DOM zone and DOM LSE since 2000.
- d) Provide all documents or other evidence of the "significant interest in data centers locating in Virginia".
- e) Provide the Company's forecasts of monthly data center energy sales and peak load, breaking out the DOM zone and DOM LSE forecasts separately.
- f) Identify all source documents, analyses and studies for the Company's data center load forecasts. Identify the source and date for each document, analysis or study.
- g) Provide any other data or analysis pertaining to historical or forecast data center loads in the DOM zone.

**Responses:**

- a) The Company objects to this request as overly broad, unduly burdensome, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks "historical data center loads since 2000, including monthly energy and peak loads as far back as data is available." Notwithstanding and subject to these objections, the Company provides the following response:

The Company does not track data center actual load information in the DOM Zone, only in the DOM LSE. Therefore, the Company does not have any information as to the nature of the actual load of its wholesale customers, such as NOVEC, which also serves part of the data center industry in Virginia.

The data below represents the Dominion Energy (DOM LSE) customer annual maximum energy and peak load for data center customers from 2011 to current.

	2011	2012	2013	2014	2015	2016	2017	2018 April YTD
Sales in MWH	2,335,422	2,821,781	3,191,987	3,766,668	4,309,573	5,352,648	6,423,610	2,341,511
Peak in MW	n/a	n/a	462	532	636	753	931	980

- b) See the Company's response to Staff Set 2-16.

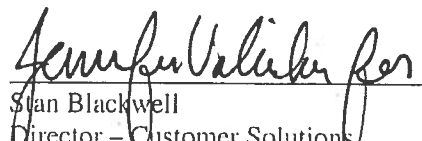
- c) The Company objects to this request as vague, overly broad, unduly burdensome, potentially voluminous, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks "historical hourly data center loads...since 2000." The Company further objects to this request because it would require original work.
- d) The Company objects to this request on the basis it would require original work and to the extent it seeks confidential customer information. The Company further objects to this request to the extent it seeks publicly available information indicating "significant interest in data centers locating in Virginia," which is available to Staff and any party to this proceeding. Additionally, the Company objects to this request as vague, overly broad, unduly burdensome, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks "all documents or other evidence," without limitation. Notwithstanding and subject to the foregoing objections, the Company provides the following response:

While a driver of energy sales in the Company's service territory is new and existing data centers, and the Company has seen significant interest, it is important to note that "significant interest" does not necessarily mean that those customers expressing interest will locate in the DOM LSE service territory.

- e) For forecasted load associated with data centers, see the Company's response to Staff Set 2-16. The Company does not break down the data center forecast between DOM Zone and DOM LSE.
- f) See the Company's response to Staff Set 2-16.
- g) The Company has no additional data to provide pertaining to historical or forecast data center loads in the DOM Zone.

Virginia Electric and Power Company  
Case No. PUR-2018-00065  
Environmental Respondents  
First Set


The following response to Question No. 42 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to customer relations.

  
Stan Blackwell  
Director - Customer Solutions  
Dominion Energy Virginia

The following response to Question No. 42 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to energy efficiency programs.

\_\_\_\_\_  
Michael T. Hubbard  
Manager, Energy Conservation  
Virginia Electric and Power Company

The following response to Question No. 42 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to load forecasting.

  
\_\_\_\_\_  
Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

\_\_\_\_\_  
Question No. 42

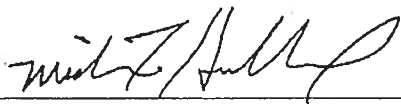
**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**First Set**

The following response to Question No. 42 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to customer relations.

---

Stan Blackwell  
Director – Customer Solutions  
Dominion Energy Virginia

The following response to Question No. 42 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to energy efficiency programs.



---

Michael T. Hubbard  
Manager, Energy Conservation  
Virginia Electric and Power Company

The following response to Question No. 42 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to load forecasting.

---

Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

---

**Question No. 42**

Has the Company researched whether the owners of the existing or anticipated data centers are making efforts to become more energy efficient? What has the Company assumed about efficiency improvements over time at these facilities? Provide all supporting documents.


**Response:**

While Company representatives have had anecdotal conversations with data center customers regarding their efforts to become more energy efficient, the Company has not conducted formal research in this area since these facilities are largely exempt from participation in the Company's energy efficiency programs.


As such, the Company's current forecasting methodology makes no explicit assumptions regarding future data center efficiency improvements beyond what may be the trend in existing data centers efficiency embedded in its historical regression analysis.

Virginia Electric and Power Company  
Case No. PUR-2018-00065  
Environmental Respondents  
First Set

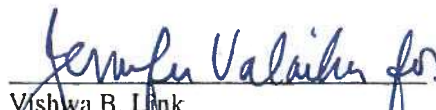
The following response to Question No. 43(a) of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to customer relations.

  
Stan Blackwell  
Director - Customer Solutions  
Dominion Energy Virginia

The following response to Question No. 43(b) of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to load forecasting.

  
Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

The following response to Question No. 43 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision as it pertains to legal matters.

  
Vishwa B. Link  
McGuireWoods LLP

---

**Question No. 43**

Is the Company aware whether the owners of any of the existing or anticipated data centers have expressed intentions to increasingly rely on renewable sources of energy?

- a) If so provide all such documents.
- b) Explain how such intentions are taken into account in the 2018

**Response:**

The Company objects to the request as vague, overly broad, unduly burdensome, potentially voluminous, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks information regarding "intentions" of third-party data center owners of which the Company may be "aware." The Company further objects to this request to the extent it seeks confidential customer information. Notwithstanding and subject to the foregoing, the Company provides the following response:

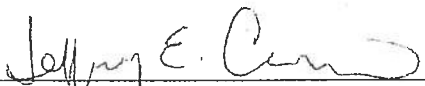
- a) The Company objects to this request as overly broad, unduly burdensome, potentially voluminous, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks "all such documents" without limitation. The Company further objects to this request to the extent it seeks confidential customer information. Notwithstanding and subject to these objections, the Company provides the following response.

While not specifically aware of whether the owners of any of the existing or anticipated data centers have expressed interest have expressed intentions in increasingly relying on renewable sources of energy, the Company is generally aware of an increased interest in renewable sources of energy expressed by all of its customer segments. It is important to note, however, that Dominion Energy Virginia is not the only source or renewables for customers. Many of our customers achieve 100% renewables by securing world-wide RECs. Customers sometimes share their goals and ask what the Company can provide, but it is the Company's experience that these customers meet their needs from a variety of sources.

- b) See the Company's responses and objections to this question above. In general, the integrated resource planning ("IRP") process, including development of sales and load forecasts, takes into account only quantifiable, proven, and firm parameters. "Intentions" do not constitute observable quantity and, as such, are not part of the Company's IRP process or modeling.

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**First Set**

The following response to Question No. 44 of the First Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on May 29, 2018 has been prepared under my supervision.

  
 Jeffrey E. Currier  
 Manager – Planning & Analysis  
 Virginia Electric and Power Company

**Question No. 44**

Reference page 52: “As a PJM member, the Company is a signatory to PJM’s Reliability Assurance Agreement, which obligates the Company to own or procure sufficient capacity to maintain overall system reliability.”

- a) Provide a specific citation to the Reliability Assurance Agreement for an obligation for the Company to own or procure capacity.
- b) Provide a specific citation to the Reliability Assurance Agreement for the determination of the quantity of capacity the Company believes it is obligated to own or procure.
- c) Confirm that this obligation requires no action to own or procure capacity by the Company, because the obligation is satisfied through the RPM auction and resulting assignment of capacity obligations to LSEs. If not confirmed, explain.

**Response:**

- a) Article 7 of PJM’s Reliability Assurance Agreement (“RAA”), which is available at <https://www.pjm.com/directory/merged-tariffs/raa.pdf>, outlines the provisions for forecasted pool requirements and unforced capacity obligations. The following are the experts from the RAA that appear relevant to the question:

**7.1 Forecast Pool Requirement and Unforced Capacity Obligations.**

- (a) The Forecast Pool Requirement shall be established to ensure a sufficient amount of capacity to meet the forecast load plus reserves adequate to provide for the unavailability of Generation Capacity



Resources, load forecasting uncertainty, and planned and maintenance outages. . . .

**7.2 Responsibility to Pay Locational Reliability Charge.**

Except to the extent its capacity obligations are satisfied through the FRR Alternative, each Party shall pay, as to the loads it serves in each Zone during a Delivery Year, a Locational Reliability Charge for each such Zone during such Delivery Year. The Locational Reliability Charge shall equal such Party's Daily Unforced Capacity Obligation in a Zone, as determined pursuant to Schedule 8 of this Agreement, times the Final Zonal Capacity Price for such Zone, as determined pursuant to Attachment DD of the PJM Tariff.

**7.3 LSE Option to Provide Capacity Resources.**

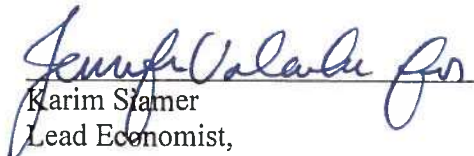
A Party obligated to pay a Locational Reliability Charge for a Delivery Year may partially or wholly offset amounts it must pay for such charge by offering Capacity Resources for sale in the Base Residual Auction or an Incremental Auction applicable to such Delivery Year; provided such resources clear such auctions. . . .

Article 1 of the RAA provides the definitions applicable to the RAA.

- b) See the response to subpart (a) of this question. Additionally, the RAA outlines the requirement for the load to pay a Locational Reliability Charge, which is defined by the RPM auction process. The resulting volume and price from the auction process for the applicable delivery area dictates the cost charged to the LSE for purchasing capacity vis-a-vis the Locational Reliability Charge. This is effectively the procurement of capacity from the RPM auction to service the LSE requirement. At the same time, the generation fleet is offered into PJM as a means to offset the load procurement obligation in the RPM market as described in Article 7.3 of the RAA.
- c) The Company confirms that this obligation requires no action or procure capacity by the Company because the obligation is satisfied through the RPM auction and resulting assignment of capacity obligations to LSEs.

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**Fourth Set**

The following response to Question No. 4A-1 of the Fourth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 14, 2018 has been prepared under my supervision.

  
Karim Slamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

The following response to Question No., 4A-1 of the Fourth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 14, 2018 has been prepared under my supervision.

  
Mishwa B. Link  
McGuireWoods LLP

---

**Question No. 4A-1.**

Reference Attachment ER Set 1-4(a) (KS).

- a) The Company has adopted a “Bass Diffusion model” equation to forecast data center loads (pp. 6-7). Provide all documents of which the Company is aware documenting use of the Bass Diffusion model for forecasting adoption of a new technology years into the future (as distinguished from describing past adoption, or near term adoption).
- b) Reference p. 8 (“The Bass Diffusion equation is fit to the historical annual Data Center MW loads...”). Explain how the equation was fit, including how the particular values of the equation’s “Innovation” and “Imitation” parameters were selected and on what basis. Provide all workpapers associated with this process to fit the equation.

- c) Reference p. 8. Explain why 2040 was selected as the date on which the “limiting value” was reached. Were other end dates evaluated? Provide all analysis supporting the selection of 2040.
- d) Reference p. 8 (“The historical monthly Data Center MWh sales and MW peak series are each regressed onto the monthly centered moving average of the diffusion-based index curve generated in step 1)).” Provide detailed information about the exact regressions that were performed. Provide the equations and identify the exact input data ranges that were used.

**Response:**

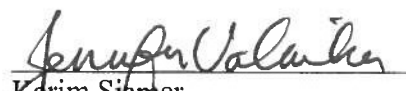
- a) The Company objects to this request as overly broad, unduly burdensome, potentially voluminous, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks “all documents of which the Company is aware documenting use of the Bass diffusion model” without limitation. Notwithstanding and subject to these objections, the Company provides the following response:

See the Rebuttal Testimony of Eric Fox filed on September 8, 2017, in the Company’s 2017 Plan proceeding, Case No. PUR-2017-00051, which is publicly available on the Commission’s website at <http://www.scc.virginia.gov/docketsearch#caseDocs/137173>.

- b) The goal in projecting data center sales is to design imitation values and innovation values such that the theoretical adoption curve (i.e., the output of the bass diffusion model, shown as the blue line on the chart in tab TrendCalc on Attachment Staff Set 2-16 (KS)) is a close “fit” to the historical indexed data center capacity (red line). These imitation and innovation values are selected through numerical calibration, such that the projections “fit” as close possible to the historical. The workpapers supporting these calibrations are provided in Attachment Staff Set 2-16 (KS).
- c) Neither the year 2040 or any other year was “selected” so as to determine the maximum index value of 1.0. Rather, 2040 was merely noted as the year at which the calibrated Bass curve attained the index value of 1.0.
- d) The Company regresses historical monthly data center sales (see Attachment Staff Set 2-16 (KS), DC\_BSALES tab, Column D, 08/2010-07/2017) onto the monthly centered moving average of the diffusion-based index curve (see Attachment Staff Set 2-16 (KS), DC\_BSALES tab, Columns F and G, 08/2010-07-2017). Regression results are presented in Attachment ER Set 4A-1 (KS).

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**Fourth Set**

The following response to Question No. 4A-5 of the Fourth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 14, 2018 has been prepared under my supervision.

  
Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

**Question No. 4A-5.**

Reference Attachment Staff Set 2-16, tab Trend\_Calc.

- a) Identify the sources for the historical data in columns DC\_MW, DC\_Capped, DC\_CPMW, DC\_CPCapped. Provide documents and workpapers as applicable.
- b) Identify the sources for the forecast period data in columns DC\_MW, DC\_Capped, DC\_CPMW, DC\_CPCapped. Provide documents and workpapers as applicable.
- c) Identify the sources for the data in column CostIdx. Provide documents and workpapers as applicable.
- d) Explain how the CostIdx data is used in the analysis.
- e) Identify which, if any, input data or assumptions used in the data center forecast for the 2018 IRP are different from those used in the forecast presented by Mr. Fox of Itron on rebuttal in the 2017 IRP case.

**Response:**

(a) The Company adopted the values determined by Itron, and provided in the report attached to the rebuttal testimony of Eric Fox. See the Rebuttal Testimony of Eric Fox filed on September 8, 2017, in the Company's 2017 Plan proceeding, Case No. PUR-2017-00051, which is publicly available on the Commission's website at <http://www.scc.virginia.gov/docketsearch#caseDocs/137173>. See also Confidential Attachment ER Set 4A-4(a) (KS).

(b) The Company adopted the values determined by Itron, and provided in the report attached to the rebuttal testimony of Eric Fox. See the Rebuttal Testimony of Eric Fox filed on September 8, 2017, in the Company's 2017 Plan proceeding, Case No. PUR-2017-00051, which is publicly available on the Commission's website at <http://www.scc.virginia.gov/docketsearch#caseDocs/137173>. See also Confidential Attachment ER Set 4A-4(a) (KS).

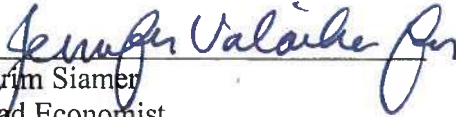
(c) The Company adopted the values determined by Itron, and provided in the report attached to the rebuttal testimony of Eric Fox. See the Rebuttal Testimony of Eric Fox filed on September 8, 2017, in the Company's 2017 Plan proceeding, Case No. PUR-2017-00051, which is publicly available on the Commission's website at <http://www.scc.virginia.gov/docketsearch#caseDocs/137173>. See also Confidential Attachment ER Set 4A-4(a) (KS).

(d) CostIdx data is not used in the analysis.


(e) Mr. Fox of Itron was provided historical monthly data centers sales up to and including August 2017 and the 2017 data centers five-year plan. For its 2018 Plan modeling, the Company updated historical monthly data centers to include September and October of 2017 and an updated version of its internal five year plan. See the Company's response to ER Set 4A-2(a).

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**Sixth Set**

The following response to Question No. 3 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision.

  
 Karim Siamer  
 Lead Economist,  
 Load Research and Forecast  
 Dominion Energy Services, Inc.

The following response to Question No. 3 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision as it pertains to legal matters.

  
 Vishwa B. Link  
 McGuireWoods LLP

**Question No. 3**

Reference the response to ER 1-36(a).

- a) Admit or deny that the Company has no research or analysis supporting its forecast of incremental new data center loads beyond the response to Staff Set 2-16.
- b) If the Company denies as to part (a), provide all such research and analysis.

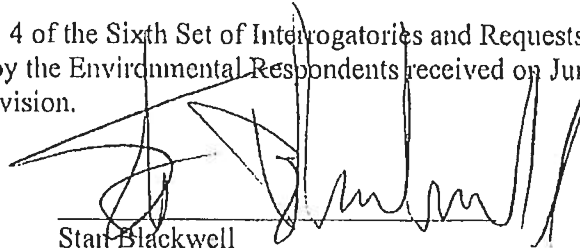
**Response:**

The Company objects to this request to the extent it appears the Environmental Respondents are attempting to serve requests for admission on the Company which is inconsistent with 5 VAC 5-20-260. Under the Commission's Rules of Practice and Procedure, Requests for Admission are only allowed in a proceeding pursuant to 5 VAC 5-20-280, which is "Discovery Applicable Only to 5 VAC 5-20-90 Proceedings."

See the Company's objections and response to ER Set 1-36(a-c). The data center load forecast is derived using a Bass Diffusion Model, which is a standard modeling approach for forecasting the adoption of new technologies.

Virginia Electric and Power Company  
Case No. PUR-2018-00065  
Environmental Respondents  
Sixth Set

The following response to Question No. 4 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision.



Stan Blackwell  
 Director – Customer Solutions  
 Dominion Energy Virginia

The following response to Question No. 4 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision as it pertains to legal matters.



Vishwa B. Link  
 McGuireWoods LLP

**Question No. 4**

Reference the response to ER 1-37(d).

- a) Admit or deny that the Company has no documents or other evidence of the claimed “significant interest in data centers locating in Virginia.”
- b) If the Company denies as to part (a), provide all such documents and other evidence.

**Response:**

The Company objects to this request to the extent it appears the Environmental Respondents are attempting to serve requests for admission on the Company which is inconsistent with 5 VAC 5-20-260. Under the Commission’s Rules of Practice and Procedure, Requests for Admission are only allowed in a proceeding pursuant to 5 VAC 5-20-280, which is “Discovery Applicable Only to 5 VAC 5-20-90 Proceedings.”

The Company further objects to this request to the extent that it seeks confidential customer information, as was stated in the response to ER Set 1-37, among other objections. Notwithstanding and subject to these objections, the Company provides the following response.

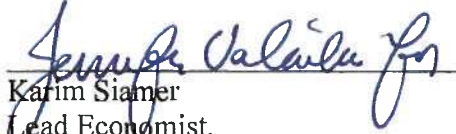
Consistent with Dominion Energy Virginia’s Privacy Policy, the Company is committed to

protecting customers' personal data while providing safe, reliable and affordable services. See <https://www.dominionenergy.com/privacy>. While the underlying data is confidential customer information, at an aggregate level, the Company has 58 potential data center projects with a requested capacity of 1,696 MW as of June 2018. While not all of these potential data center projects will be connected, this is a strong indicator of significant interest in Virginia. Note that the 2018 Plan is based on the 5-year plan developed in October of 2017. The aggregated project information above is as of June of this year.



**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**Sixth Set**

The following response to Question No. 5 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision.

  
Karim Siamer  
Lead Economist,  
Load Research and Forecast  
Dominion Energy Services, Inc.

The following response to Question No. 5 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision as it pertains to legal matters.

  
Vishwa B. Link  
McGuire Woods LLP

**Question No. 5**

Reference the response to ER 1-37(g).

- a) Admit or deny that the Company has no other data or analysis pertaining to forecast data center loads in the DOM Zone other than as provided in response to this data request.
- b) If the Company denies as to part (a), provide all additional such data and analysis.


**Response:**

The Company objects to this request to the extent it appears the Environmental Respondents are attempting to serve requests for admission on the Company which is inconsistent with 5 VAC 5-20-260. Under the Commission's Rules of Practice and Procedure, Requests for Admission are only allowed in a proceeding pursuant to 5 VAC 5-20-280, which is "Discovery Applicable Only to 5 VAC 5-20-90 Proceedings."

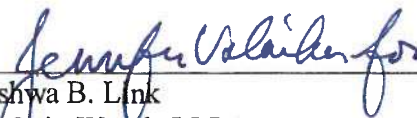
See the Company's objections and response to ER Set 1-37.

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**Sixth Set**

The following response to Question No. 6 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision.

  
 Karim Siamer  
 Lead Economist,  
 Load Research and Forecast  
 Dominion Energy Services, Inc.

The following response to Question No. 6 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision as it pertains to legal matters.

  
 Vishwa B. Link  
 McGuireWoods LLP

**Question No. 6**

Reference the response to ER 1-30.

- a) With respect to the methodological differences discussed in Section 2.3 of the 2017 Plan referenced at page 22 of the 2018 Plan, admit or deny that the Company has not performed any analysis of the impact of these methodological differences with regard to the PJM 2018 load forecast and the Company's load forecast used in the 2018 IRP.
- b) If the Company denies as to part (a), provide the analysis with workpapers.

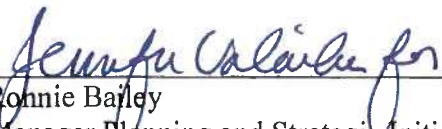
**Response:**

The Company objects to this request to the extent it appears the Environmental Respondents are attempting to serve requests for admission on the Company which is inconsistent with 5 VAC 5-20-260. Under the Commission's Rules of Practice and Procedure, Requests for Admission are only allowed in a proceeding pursuant to 5 VAC 5-20-280, which is "Discovery Applicable Only to 5 VAC 5-20-90 Proceedings."

See the Company's objections and response to ER Set 1-30. See also Sections 2.3 and 6.9 of the 2018 Plan.

**Virginia Electric and Power Company**  
**Case No. PUR-2018-00065**  
**Environmental Respondents**  
**Sixth Set**

The following response to Question No. 10 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision.

  
 Ronnie Bailey  
 Manager Planning and Strategic Initiatives  
 Dominion Energy Virginia

The following response to Question No. 10 of the Sixth Set of Interrogatories and Requests for Production of Documents Propounded by the Environmental Respondents received on June 28, 2018 has been prepared under my supervision as it pertains to legal matters.

  
 Vishwa B. Link  
 McGuireWoods LLP

**Question No. 10**

Reference Attachment ER Set 1-38(RB), page 1, an email from Ronnie Bailey that states, “We continue to try and obtain updated information from NOVEC on their block load data centers. We hope to get that any day and will forward to you as soon as they provide. In the mean time I see no choice but to use their 2016.”

- a) Provide the “information” from NOVEC referenced in the email, whose receipt was anticipated “any day.”
- b) Provide any other or more recent information the Company has received from NOVEC regarding its data center loads (past or forecast).
- c) Clarify what is meant by “block load data centers.” Is this a subset of all data centers?

**Response:**

(a) The Company objects to this request to the extent it seeks information that was not used to develop the 2018 Plan. Notwithstanding and subject to these objections, the Company provides the following response.

The Company did not receive the additional “information from NOVEC” referenced as anticipated that was provided to John Reynolds at PJM. In a separate email, the Company did receive from NOVEC its yearly load projections for all its existing substation delivery points, which included some projects for Large Customer Inquiries. See Attachment ER Set 6-10 (RB), which has been redacted of customer information that is confidential to NOVEC.

(b) The Company objects to this request as overly broad, unduly burdensome, and not relevant or reasonably calculated to lead to the production of admissible evidence in this proceeding to the extent it seeks “any other or more recent information,” some of which may not have been used to develop the 2018 Plan. Notwithstanding and subject to the foregoing objection, the Company provides the following response.

See Company’s response to ER Set 4A-6 (b) and (c), and the Company’s response to ER Set 6-10 (a) above.

(c) A block load is considered to be an area of concentrated load (e.g. data center campus) where the growth is expected to occur at a faster rate than the growth of the surrounding area or zone.